

## 6. Review Request to Establish a Food, Health and Biosecurity Program – KSU Provost Taber

### Background

Kansas State University has identified four initiatives as part of the refresh of our K-State 2025 strategic plan. Preeminent among these is a renewed focus on our land grant core strengths in Global Food, Health, and Biosecurity. A central challenge facing this and following generations is how the world will address the critical nexus of food, health, and biosecurity. The demand on resources will grow exponentially due to increased population, environmental challenges, and large-scale migrations. Food quality, availability, safety, cost, and security will be of paramount importance to human health and societal stability. Research and education in biosecurity is critical in safeguarding our communities from infectious disease. The connection among food systems, biosecurity, and human and animal health is at the core of our strategic initiative in Global Food, Health, and Biosecurity. This work will attract new companies to the state, while supporting existing business advancement. Industry sponsored research and new job creation are at the heart of this strategic initiative.

### Unique Role in Agriculture and Food

Kansas State University is the first historical land grant university in the country and the only land grant university in the state of Kansas. The K-State College of Agriculture and K-State Research and Extension (KSRE) generate wide-ranging mission-specific impacts through the functions of teaching, research, and extension programming. For Kansas, performance of these three missions generates valuable advancements in the state's economy, for society, and for the citizens of Kansas.

Agriculture is the state's largest industry and economic driver. Sixty-six agriculture and food sectors combine to contribute \$68.0 billion in economic impact in the state, 45% of the total Kansas economy. The agriculture and food sector combine to employ 247,000 Kansans, 13% of the state workforce. At least 88% of all land in Kansas is farmland, and agriculture and food are a state-wide industry. In our interconnected world, agriculture and food are defined as a secure market. We cannot rest on history and our past success—the agriculture and food sectors will be propelled forward by scientific research and innovation, and we intend to be on the forefront. A key goal in this initiative is to support an educated, skilled workforce, who can contribute to the state, nation, and world.

### Proposal

Kansas State University proposes to create the Institute of Global Food, Health, and Biosecurity (Institute) to advance the University and the State of Kansas and capitalize on our national and international strengths in this area. The new Institute will leverage many of our existing academic and research strengths in food science and safety as well as health and well-being while at the same time developing new areas to meet the changing needs of today's workforce.

Through the Institute, K-State will lead the effort to answer the challenge facing Kansas and the world on how to address the Food-Health-Biosecurity nexus. KSU would leverage its strong partnerships with regional corporate and governmental entities in animal health and biosecurity; while at the same time developing new programs and engagements to build on our successes in entrepreneurship, company attraction, and economic development. KSU would develop and deliver new or expand existing curriculum emphasizing these key initiatives to prepare the future workforce. KSU envisions this new/expanded interdisciplinary curriculum will prepare our graduates for careers in food systems, health, and biosecurity fields. This would build on our unique programs in milling, baking, food, and feed sciences. In addition, biosecurity and health programming through the Colleges of Veterinary Medicine, Agriculture, Arts and Sciences, and Health and Human Sciences will contribute to the interdisciplinary curriculum and serve a variety of important industries. KSU will deliver this curriculum in innovative ways to meet the changing needs of both traditional and non-traditional students.

In 2009, Manhattan was selected as the new site for the National Bio- and Agro-defense Facility (NBAF), based on the concentration of talent, physical assets, workforce training, and regional industries related to animal health,

food safety, and biosecurity at Kansas State. K-State performs over \$120 million in food, health, nutrition, and biodefense research annually, possesses demonstrated capabilities to generate alternative solutions to the global challenges, and serves as a critical partner for NBAF. In partnerships with over a dozen global food innovation and health companies, K-State has garnered over \$12M in industry support of this mission over the past three years. The Institute would further position the university to define how the 21<sup>st</sup> century land-grant mission around food, health, and biosecurity will be realized and how a \$65 billion per year industry in Kansas will be protected. Lastly, this funding would enable critical infrastructure improvements necessary for the research and curricular activities associated with the Institute. A significant part of the underlying facilities that will support this strategic effort lies in the College of Agriculture, and these facilities are not adequate. Shellenburger hall, originally built in 1953 with its latest addition in 1983, needs to be demolished, as well as the Feed Technology facility, also originally build in the mid 1950s. A recent engineering analysis of these buildings indicated significant code deficiencies and significant physical limitations which makes these facilities impractical for modern teaching and research functions.

The university would secure bonding authority to finance the demolition of these obsolete facilities and relocate the Department of Grain Sciences and Industry into a new structure adjacent to Call Hall and Weber Hall. This new structure would enhance our academic and research capabilities by leveraging the relationships between milling and baking science with the academic functions in food science (Call Hall) and feed science with livestock and companion animal nutrition (Call & Weber Hall). This synergy would impact over half of the students within the College of Agriculture while at the same time modernize our key research capacity as required for the initiative and the Institute. KSU will maximize this investment by leveraging and supplementing our infrastructure improvements with philanthropic and/or federal resources to finance these updates.

Through the Institute, Kansas State University will work to address through teaching, research, engagement, and service these global truths that challenge the future of our most basic needs: health and safety.

**Metrics**

The metrics associated with Pillar 3 in the new Board strategic plan will be directly related to this project. KSU would measure the success of this Institute and strategic initiative in terms of direct jobs and investment, research grants, companies attracted and created, and building the talent pipeline for these industries.

**Budget**

#	Budget Item	Description	Amount
1	Programming & Administration	Funding in this area would be utilized to develop and deliver new or expand existing curriculum.	1,500,000
2	Research & Outreach	Funding in this area would involve developing research grants and partnerships with key industry and regional partners as well as disseminating this knowledge to the citizens of Kansas and the world.	500,000
3	Debt Service	Debt service on approximately \$40 million in bonding to update critical infrastructure .	\$ 3,000,000
			\$ 5,000,000